



Governor

*Lori F. Kaplan*  
Commissioner

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

---

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-

6015

(317) 232-8603  
(800) 451-6027  
[www.state.in.us/idem](http://www.state.in.us/idem)

## MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Tuthill Transport Technologies  
9098 West 800 South  
Brookston, Indiana 47923**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 181-16107-00031

Issued by:  
Paul Dubenetzky, Branch Chief  
Office of Air Quality

Issuance Date:

## TABLE OF CONTENTS

<b>A</b>	<b>SOURCE SUMMARY</b> .....	<b>4</b>
A.1	General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]	
A.2	Emission Units and Pollution Control Equipment Summary	
A.3	Part 70 Permit Applicability [326 IAC 2-7-2]	
<b>B</b>	<b>GENERAL CONSTRUCTION CONDITIONS</b> .....	<b>6</b>
B.1	Permit No Defense [IC 13]	
B.2	Definitions	
B.3	Effective Date of the Permit [IC 13-15-5-3]	
B.4	Revocation of Permits [326 IAC 2-1.1-9(5)]	
B.5	Modification to Permit [326 IAC 2]	
B.6	Minor Source Operating Permit [326 IAC 2-6.1]	
<b>C</b>	<b>SOURCE OPERATION CONDITIONS</b> .....	<b>8</b>
C.1	PSD Minor Source Status [326 IAC 2-2]	
C.2	Preventive Maintenance Plan [326 IAC 1-6-3]	
C.3	Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]	
C.4	Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]	
C.5	Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]	
C.6	Permit Revocation [326 IAC 2-1-9]	
C.7	Opacity [326 IAC 5-1]	
C.8	Fugitive Dust Emissions [326 IAC 6-4]	
C.9	Performance Testing [326 IAC 3-6]	
C.10	Compliance Monitoring [326 IAC 2-1.1-11]	
C.11	Monitoring Methods [326 IAC 3]	
C.12	Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]	
	<b>Record Keeping and Reporting Requirements</b>	
C.13	Malfunctions Report [326 IAC 1-6-2]	
C.14	Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-3]	
C.15	General Record Keeping Requirements [326 IAC 2-6.1-2]	
C.16	Annual Notification [326 IAC 2-6.1-5(a)(5)]	
<b>D.1</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS - Three (3) Paint Booths PBM, PBPC, AUX1</b> .....	<b>15</b>
	<b>Emission Limitations and Standards</b>	
D.1.1	Volatile Organic Compounds (VOC) [326 IAC 8-2-12]	
D.1.2	Particulate Matter (PM) [326 IAC 6-3-2(c)]	
D.1.3	Particulate Matter (PM)	
D.1.4	Preventive Maintenance Plan [326 IAC 1-6-3]	
	<b>Compliance Determination Requirements</b>	
D.1.5	Testing Requirements	
D.1.6	Volatile Organic Compounds (VOC)	
	<b>Compliance Monitoring Requirements</b>	
D.1.7	Monitoring	

**Record Keeping and Reporting Requirements**  
D.1.8 Record Keeping Requirements

**D.2 EMISSIONS UNIT OPERATION CONDITIONS - Degreasing Operations . . . . . 18**

**Emission Limitations and Standards**  
D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]  
D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

**D.3 EMISSIONS UNIT OPERATION CONDITIONS - Welding and Metal Cutting . . . . . 20**

**Emission Limitations and Standards**  
D.3.1 Particulate Matter (PM) [326 IAC 6-3]

**Annual Notification . . . . . 22**  
**Malfunction Report . . . . . 23**

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

---

The Permittee owns and operates a metal hydraulic axles assembly and painting source.

Authorized Individual: Bill Morgan  
Source Address: 9098 West 800 South, Brookston, Indiana 47923  
Mailing Address: P. O. Box 600, Brookston, Indiana 47923  
Phone Number: 219-279-2390  
SIC Code: 7692  
County Location: White  
County Status: Attainment for all criteria pollutants  
Source Status: Major or Minor Source, under PSD Rules;  
Minor Source, Section 112 of the Clean Air Act

### A.2 Emissions units and Pollution Control Equipment Summary

---

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) auxiliary paint booth, known as AUX1, equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 5S1A in Building 5, capacity: 4 metal hydraulic axle assemblies per hour.
- (b) One (1) paint booth main, known as PBM, formerly known as main paint booth (MB), equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 4S3A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.
- (c) One (1) propane fired paint booth prime coat curing oven, known as PBPCCO, formerly known as main booth curing oven (MBCO), exhausted through stack 4S4A in Building 4, heat input capacity: 0.8 million British thermal units per hour.
- (d) One (1) propane fired evaporator, known as EVAP1, exhausted through stack 4S6A in Building 4, heat input capacity: 0.395 million British thermal units per hour.
- (e) One (1) propane fired space heater, known as SH1, exhausted through stack 2S3A in Building 2, heat input capacity: 0.130 million British thermal units per hour.
- (f) One (1) propane fired dry off oven, known as DO1, exhausted through stack 4S1A in Building 4, heat input capacity: 0.8 million British thermal units per hour.
- (g) Seven (7) propane fired space heaters, known as CRVT2:#1 - #7, exhausted through stack 5S2A in Building 5, heat input capacity: 0.42 million British thermal units per hour, each.
- (h) Eight (8) propane fired space heaters, known as CRVT3:#1 - #8, exhausted through stack 5S3A in Building 5, heat input capacity: 0.48 million British thermal units per hour, each.
- (i) Eight (8) propane fired space heaters, known as CRVT4:#1 - #8, exhausting to stack 5S4A in Building 5,

heat input capacity: 0.48 million British thermal units per hour, each.

- (j) Two (2) propane fired space heaters, known as MSH1 and MSH2, exhausted through stacks 2S1A and 2S2A in Building 5, heat input capacity: 0.13 million British thermal units per hour, each.
- (k) One (1) propane fired space heater, known as REZ1, exhausted through stack 4S4A in Building 4, heat input capacity: 0.40 million British thermal units per hour.
- (l) One (1) propane fired space heater, known as REZ2, exhausted through stack 5S8A in Building 5, heat input capacity: 0.40 million British thermal units per hour.
- (m) One (1) propane fired space heater, known as REZ3, exhausted through stack 5S5A in Building 5, heat input capacity: 0.40 million British thermal units per hour.
- (n) One (1) propane fired immersion tube heater, known as WTS1B, exhausted through stack 4S1A in Building 4, heat input capacity: 1.50 million British thermal units per hour.
- (o) One (1) wash tank washer entrance and exit, known as WTEN and WTEX, exhausted through stacks 4S1B and 4S1C, respectively, in Building 4, capacity: 8.68 pounds per hour of washing solution, total.
- (p) One (1) cold cleaner degreaser for drive assemblies, known as PWCD1, constructed after July 1, 1990, exhausted through stack 5S7A in Building 5, capacity: 4.91 gallons of mineral spirits per day.
- (q) One (1) cold cleaner degreaser for hose assemblies, known as HACD1, constructed before July 1, 1990, but after January 1, 1980, exhausted through stack 5S6A in Building 5, capacity: 1.68 gallons of mineral spirits per day
- (r) Twenty-Six (26) Metal Inert Gas (MIG) welding stations, known as MIG1 - MIG21 & MIG 23 - MIG27 with MIG1 - MIG15, MIG21 and MIG23 - MIG26 located in Building 5, MIG16 located in Building 4, MIG17 located in Building 3, and MIG18 - MIG20 and MIG 27 located in Building 2, using ER70S-3 and EA3K welding wire, capacity: five (5) pounds per hour of welding wire, each.
- (s) One (1) stick welding station, know as SW1 located in Building 3, capacity: 0.53 pounds per hour of welding rod.
- (t) One (1) oxyacetylene flame cutting table, known as FC1, located in Building 5, with a rate of thirty-six (36) inches per minute at a three (3) inch thickness.
- (u) One (1) laser cutting station, known as LC1, located in Building 5, with a rate of one hundred (100) inches per minute at a five tenths (0.5) inch thickness.
- (v) One (1) propane fired paint booth main curing oven, known as PBMCO, exhausted through stack 4S8A in Building 4, heat input capacity: 1.5 million British thermal units per hour.
- (w) One (1) paint booth for prime coat, known as PBPC, equipped with air assisted airless spray guns and dry panel filters particulate matter control, exhausted through stack 4S7A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.

## **SECTION B                      GENERAL CONSTRUCTION CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### **B.1      Permit No Defense [IC 13]**

---

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2      Definitions**

---

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### **B.3      Effective Date of the Permit [IC13-15-5-3]**

---

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

### **B.4      Revocation of Permits [326 IAC 2-1.1-9(5)]**

---

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.3      Effective Date of the Permit [40 CFR 124]**

---

Pursuant to 40 CFR 124.15, 40 CFR 124.19, and 40 CFR 124.20, the effective date of this permit will be thirty (30) days after the service of notice of the decision, except as provided in 40 CFR 124. Three (3) days shall be added to the thirty (30) day period if service of notice is by mail.

### **B.4      Revocation of Permits [326 IAC 2-2-8]**

---

Pursuant to 326 IAC 2-2-8(a)(1), this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a period of eighteen (18) months or more.

### **B.5      Modification to Permit [326 IAC 2]**

---

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### **B.6      Minor Source Operating Permit [326 IAC 2-6.1]**

---

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
  - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
  - (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit

were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development

Section prior to beginning operation of the facilities.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).
- (e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
---------------

### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

---

- (a) The total source potential to emit of all criteria pollutants are less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.
- (c) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

### C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

---

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

---

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality



Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change.  
[326 IAC 2-6.1-6(d)]
- 

**C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]**

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

**C.6 Permit Revocation [326 IAC 2-1-9]**

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.

- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

#### C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

### **Testing Requirements**

#### C.9 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a

reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

## **Compliance Monitoring Requirements**

### **C.10 Compliance Monitoring [326 IAC 2-1.1-11]**

---

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

### **C.11 Monitoring Methods [326 IAC 3]**

---

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

### **C.12 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]**

---

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
  - (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

#### **Record Keeping and Reporting Requirements**

##### **C.13 Malfunctions Report [326 IAC 1-6-2]**

---

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

##### **C.14 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]**

---

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

**C.15 General Record Keeping Requirements [326 IAC 2-6.1-2]**

---

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance

and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

**C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

---

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:  
  
Compliance Branch, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015
- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

## SECTION D.1

## EMISSIONS UNIT OPERATION CONDITIONS

- (a) One (1) auxiliary paint booth, known as AUX1, equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 5S1A in Building 5, capacity: 4 metal hydraulic axle assemblies per hour.
- (b) One (1) paint booth main, known as PBM, formerly known as main paint booth (MB), equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 4S3A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.
- (w) One (1) paint booth for prime coat, known as PBPC, equipped with air assisted airless spray guns and dry panel filters particulate matter control, exhausted through stack 4S7A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards

#### D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating), the following conditions are applicable to the three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1):

- (A) Three and five-tenths (3.5) pounds of VOC per gallon of coating less water, for air dried and forced warm air dried coatings.
- (B) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

#### D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

**D.1.3 Particulate Matter (PM)**

The dry filters shall be in operation at all times the three (3) paint booths known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1) are in operation, in order to comply with Condition D.1.2.

**D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]**

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control devices.

**Compliance Determination Requirements**

**D.1.5 Testing Requirements [326 IAC 2-1.1-11]**

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance.

**D.1.6 Volatile Organic Compounds (VOC)**

Compliance with the VOC content and usage limitations contained in Conditions D.1.1 shall be determined pursuant to 326 IAC 8-1-2(a). The source shall comply with this rule by calculating the daily volume weighted average of VOC content for the three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1), using the following formula, where n is the number of coatings (c):

$$\begin{aligned} c &= n \\ 3 \text{ coating } c \text{ (gal)} \times \text{VOC content of } c \text{ (lbs/gal, less water)} \\ \frac{c}{c} &= \frac{1}{n} \\ c &= n \\ 3 \text{ coating } c \text{ (gal)} \\ c &= 1 \end{aligned}$$

IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

**D.1.7 Monitoring**

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks 4S3A, 4S7A, and 5S1A while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.



## **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

### **D.1.8 Record Keeping Requirements**

---

- (a) To document compliance with Conditions D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (3) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) of "As Applied" coatings as necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The volume weighted VOC content of the coatings used for each day.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.2

## EMISSIONS UNIT OPERATION CONDITIONS

- (a) One (1) cold cleaner degreaser for drive assemblies, known as PWCD1, constructed after July 1, 1990, exhausted through stack 5S7A in Building 5, capacity: 4.91 gallons of mineral spirits per day.
- (b) One (1) cold cleaner degreaser for hose assemblies, known as HACD1, constructed before July 1, 1990, but after January 1, 1980, exhausted through stack 5S6A in Building 5, capacity: 1.68 gallons of mineral spirits per day.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards

#### D.2.1 Volatile Organic Compounds [326 IAC 8-3-2]

---

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation), the Permittee shall do the following while operating the two (2) cold cleaners, identified as PWCD1 and HACD1:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operating requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### D.2.2 Volatile Organic Compounds (VOC)[326 IAC 8-3-5]

---

Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of cold cleaner degreaser emissions unit identified as PWCD1 shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
  - (B) the solvent is agitated; or
  - (C) the solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four

and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

The Permittee shall ensure that the following operating requirements are met:

- (6) Close the cover whenever articles are not being handled in the degreaser.
- (7) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (8) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

- (a) Twenty-Six (26) Metal Inert Gas (MIG) welding stations, known as MIG1 - MIG21 & MIG 23 - MIG27 with MIG1 - MIG15, MIG21 and MIG23 - MIG26 located in Building 5, MIG16 located in Building 4, MIG17 located in Building 3, and MIG18 - MIG20 and MIG 27 located in Building 2, using ER70S-3 and EA3K welding wire, capacity: five (5) pounds per hour of welding wire, each.
- (b) One (1) stick welding station, know as SW1 located in Building 3, capacity: 0.53 pounds per hour of welding rod.
- (c) One (1) oxyacetylene flame cutting table, known as FC1, located in Building 5, with a rate of thirty-six (36) inches per minute at a three (3) inch thickness.
- (d) One (1) laser cutting station, known as LC1, located in Building 5, with a rate of one hundred (100) inches per minute at a five tenths (0.5) inch thickness.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards

#### D.3.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the welding and metal cutting operations shall not exceed allowable PM emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

- (a) The allowable PM emission rate for the twenty-six (26) MIG welding stations, known as MIG1 - 21 & MIG 23 - 27, shall not exceed 17.5 pounds of PM per hour when operating at a process weight rate of 8.68 tons per hour, total.
- (b) The allowable PM emission rate for the one (1) stick welder, known as SW1, shall not exceed 4.40 pounds of PM per hour when operating at a process weight rate of 1.11 tons per hour.
- (c) The allowable PM emission rate for the one (1) laser cutting station, known as LC1, shall not exceed 42.7 pounds of PM per hour when operating at a process weight rate of 40.8 tons per hour.
- (d) The allowable PM emission rate for the one (1) flame cutting station, known as FC1, shall not exceed 50.0 pounds of PM per hour when operating at a process weight rate of 88.0 tons per hour.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>Tuthill Transport Technologies</b>
<b>Address:</b>	<b>9098 West 800 Street,</b>
<b>City:</b>	<b>Brookston, Indiana 47923</b>
<b>Phone #:</b>	
<b>MSOP #:</b>	<b>181-16107-00031</b>

I hereby certify that **Tuthill Transport Technologies** is **9** still in operation.  
**9** no longer in operation.

I hereby certify that **Tuthill Transport Technologies** is **9** in compliance with the requirements of MSOP **181-16107-00031**  
**9** not in compliance with the requirements of MSOP **181-16107-00031**

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>


**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_, 100TONS/YEAR CARBON MONOXIDE ?\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/19\_\_\_\_        AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/19\_\_\_\_        AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO<sub>2</sub>, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

\_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

PAGE 1 OF 2

**Please note - This form should only be used to report malfunctions  
applicable to Rule 326 IAC 1-6 and to qualify for  
the exemption under 326 IAC 1-6-4.**

### **326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

### **326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

\_\_\_\_\_

\_\_\_\_\_





## **Indiana Department of Environmental Management Office of Air Quality**

### Technical Support Document (TSD) for a Minor Source Operating Permit

#### **Source Background and Description**

**Source Name:** Tuthill Transport Technologies  
**Source Location:** 9098 West 800 South, Brookston, Indiana 47923  
**County:** White  
**SIC Code:** 7692  
**Operation Permit No.:** 181-16107-00031  
**Permit Reviewer:** Madhurima D. Moulik

The Office of Air Quality (OAQ) has reviewed an application from Tuthill Transport Technologies relating to the operation of metal hydraulic axles assembly and painting source. This source was previously issued a registration, based on incorrect primer usage at paint booth identified as PBPC.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) auxiliary paint booth, known as AUX1, equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 5S1A in Building 5, capacity: 4 metal hydraulic axle assemblies per hour.
- (b) One (1) paint booth main, known as PBM, formerly known as main paint booth (MB), equipped with air assisted airless spray guns and dry panel filters for particulate matter control, exhausted through stack 4S3A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.
- (c) One (1) propane fired paint booth prime coat curing oven, known as PBPCCO, formerly known as main booth curing oven (MBCO), exhausted through stack 4S4A in Building 4, heat input capacity: 0.8 million British thermal units per hour.
- (d) One (1) propane fired evaporator, known as EVAP1, exhausted through stack 4S6A in Building 4, heat input capacity: 0.395 million British thermal units per hour.
- (e) One (1) propane fired space heater, known as SH1, exhausted through stack 2S3A in Building 2, heat input capacity: 0.130 million British thermal units per hour.
- (f) One (1) propane fired dry off oven, known as DO1, exhausted through stack 4S1A in Building 4, heat input capacity: 0.8 million British thermal units per hour.
- (g) Seven (7) propane fired space heaters, known as CRVT2:#1 - #7, exhausted through stack 5S2A in Building 5, heat input capacity: 0.42 million British thermal units per hour, each.

- (h) Eight (8) propane fired space heaters, known as CRVT3:#1 - #8, exhausted through stack 5S3A in Building 5, heat input capacity: 0.48 million British thermal units per hour, each.
- (i) Eight (8) propane fired space heaters, known as CRVT4:#1 - #8, exhausting to stack 5S4A in Building 5, heat input capacity: 0.48 million British thermal units per hour, each.
- (j) Two (2) propane fired space heaters, known as MSH1 and MSH2, exhausted through stacks 2S1A and 2S2A in Building 5, heat input capacity: 0.13 million British thermal units per hour, each.
- (k) One (1) propane fired space heater, known as REZ1, exhausted through stack 4S4A in Building 4, heat input capacity: 0.40 million British thermal units per hour.
- (l) One (1) propane fired space heater, known as REZ2, exhausted through stack 5S8A in Building 5, heat input capacity: 0.40 million British thermal units per hour.
- (m) One (1) propane fired space heater, known as REZ3, exhausted through stack 5S5A in Building 5, heat input capacity: 0.40 million British thermal units per hour.
- (n) One (1) propane fired immersion tube heater, known as WTS1B, exhausted through stack 4S1A in Building 4, heat input capacity: 1.50 million British thermal units per hour.
- (o) One (1) wash tank washer entrance and exit, known as WTEN and WTEX, exhausted through stacks 4S1B and 4S1C, respectively, in Building 4, capacity: 8.68 pounds per hour of washing solution, total.
- (p) One (1) cold cleaner degreaser for drive assemblies, known as PWCD1, constructed after July 1, 1990, exhausted through stack 5S7A in Building 5, capacity: 4.91 gallons of mineral spirits per day.
- (q) One (1) cold cleaner degreaser for hose assemblies, known as HACD1, constructed before July 1, 1990, but after January 1, 1980, exhausted through stack 5S6A in Building 5, capacity: 1.68 gallons of mineral spirits per day
- (r) Twenty-Six (26) Metal Inert Gas (MIG) welding stations, known as MIG1 - MIG21 & MIG 23 - MIG27 with MIG1 - MIG15, MIG21 and MIG23 - MIG26 located in Building 5, MIG16 located in Building 4, MIG17 located in Building 3, and MIG18 - MIG20 and MIG 27 located in Building 2, using ER70S-3 and EA3K welding wire, capacity: five (5) pounds per hour of welding wire, each.
- (s) One (1) stick welding station, know as SW1 located in Building 3, capacity: 0.53 pounds per hour of welding rod.
- (t) One (1) oxyacetylene flame cutting table, known as FC1, located in Building 5, with a rate of thirty-six (36) inches per minute at a three (3) inch thickness.
- (u) One (1) laser cutting station, known as LC1, located in Building 5, with a rate of one hundred (100) inches per minute at a five tenths (0.5) inch thickness.
- (v) One (1) propane fired paint booth main curing oven, known as PBMCO, exhausted through stack 4S8A in Building 4, heat input capacity: 1.5 million British thermal units per hour.
- (w) One (1) paint booth for prime coat, known as PBPC, equipped with air assisted airless spray guns and dry panel filters particulate matter control, exhausted through stack 4S7A in Building 4, capacity: 2 metal hydraulic axle assemblies per hour.

## Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Registration No. 181-14211-00031, issued on June 4, 2002.

The emissions from paint booth identified as PBPC were miscalculated in Registration No. 181-14211-00031, based on incorrect primer usage per unit. The correct potential to emit of the source places the source in a Minor Source category, as explained below. Therefore, a Minor Source Operating Permit (MSOP) will be issued to the source.

## Enforcement Issue

There are no enforcement actions pending.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
4S3A	Paint Booth Main (PBM)	27	2.8	12800	68
4S8A	Paint Booth Main Cure Oven (PBMCO)	30	1.0	1100	200
4S7A	Paint Booth Prime Coat (PBPC)	27	2.8	12800	68
4S4A	Paint Booth Prime Coat Cure Oven (PBPCCO)	30	0.5	307	160
5S1A	Paint Booth Auxiliary (AUX)	30	2.8	7040	72
4S1A	Wash Tank Stage I Burner (WTS1B)	27	0.67	616	714
4S1B	Wash Tank Entrance (WTEN)	27	2.0	4766	85
4S1C	Wash Tank Washer Exit (WTEX)	27	2.0	4869	85
4S2A	Dryoff Oven 1 (DO1)	27	0.5	348	165
4S6A	Evaporator (EVAP1)	27	0.42	374	100
5S7A	Parts Washer Cold Degreaser (PWCD1)	30	1.0	1000	75
5S6A	Hose Assembly Cold Degreaser (PWCD1)	30	1.0	500	75
2S3A	Space Heater (SH1)	16	0.5	23	100
5S2A	Space Heater Tube 2 Units 1 through 7 (CRVT2 #1 - #7)	16	0.83	522	100
5S3A	Space Heater Tube 3 Units 1 through 8 (CRVT3 #1 - #8)	16	0.83	682	100

5S4A	Space Heater Tube 4 Units 1 through 8 (CRVT4- #1 - #8)	16	0.83	682	100
2S1A	Modine Space Heater #1 (MSH 1)	16	0.5	23	100
2S2A	Modine Space Heater #2 (MSH 2)	16	0.5	23	100
4S5A	REZNOR Space Heater #1 (REZ 1)	27	0.83	71	100
5S8A	REZNOR Space Heater #2 (REZ 2)	16	0.83	71	100
5S5A	REZNOR Space Heater #3 (REZ 3)	30	0.83	71	100

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on June 11, 2002.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations. The potential to emit of the entire source (in tons per year) is summarized below:

Operation	PM	PM-10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Surface Coating	19.54	19.54	-	-	18.03	-
Propane Ovens	0.09	0.09	0.19	2.82	0.04	0.48
Space Heaters	0.35	0.35	0.76	11.10	0.15	1.87
Tube Heaters	0.04	0.04	0.09	1.36	0.02	0.23
Evaporator	0.01	0.01	0.03	0.36	0.01	0.06
Degreasing	-	-	-	-	8.66	-
Welding + Thermal Cutting	9.78	9.78	-	-	-	-
<b>TOTAL</b>	<b>29.81</b>	<b>29.81</b>	<b>1.07</b>	<b>15.64</b>	<b>26.91</b>	<b>2.64</b>

Operation	Xylene	MIBK	MEK	Toluen e	Ethyl Benzen e	Glycol Ethers	Cobalt	Lead	Mn	Ni	Cr	Com b HAPS
Surface Coating	4.39	2.84	0.11	2.38	0.79	9.47	0.15	1.19	-	-	-	

Welding + Thermal Cutting	-	-	-	-	-	-	0.0	-	0.23	0.01	0.01	
<b>TOTAL</b>	<b>4.39</b>	<b>2.84</b>	<b>0.11</b>	<b>2.38</b>	<b>0.79</b>	<b>9.47</b>	<b>0.15</b>	<b>1.19</b>	<b>0.23</b>	<b>0.01</b>	<b>0.01</b>	<b>21.57</b>

### Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	29.81
PM-10	29.81
SO <sub>2</sub>	1.07
VOC	26.91
CO	2.64
NO <sub>x</sub>	15.64

HAP's	Potential To Emit (tons/year)
Xylene	4.39
MIBK	2.84
MEK	0.11
Toluene	2.38
Ethylbenzene	0.79
Glycol Ethers	9.47
Cobalt	0.15
Lead	1.19
Manganese	0.23
Nickel	0.01
Chromium	0.01
<b>TOTAL</b>	<b>21.57</b>

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 100 tons per year, therefore, the source is subject to the provisions of 326 IAC 2-6.1. The potential to emit of PM and PM-10, as well as the potential to emit of VOCs is greater than 25 tons per year. Therefore, a Minor Source Operating Permit will be issued to the source.

### Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
Paint Booth Prime Coat (PBPC)	0.177	0.177	-	5.34	-	-	Single 5.08 Total 5.08
Paint Booth Main (PBM) and Auxiliary Paint Booth (AUX1)	0.214	0.214	-	12.7	-	-	Single 4.39 Total 16.2
Two (2) cold cleaner degreasers (PWCD1 and HACD1)	-	-	-	8.66	-	-	-
One (1) evaporator (EVAP1)	0.011	0.011	0.025	0.005	0.061	0.359	-
Paint booth main curing oven, paint booth prime coat curing oven and Dry Off Oven (PBMCO, PBPCCO, and DO1)	0.089	0.089	0.193	0.037	0.475	2.82	-
One (1) Fire Immersion Tube (WTS1B)	0.043	0.043	0.093	0.018	0.230	1.36	-
Twenty-nine (29) space heaters (SH1, MSH1 & 2, REZ1,2,& 3, CRVT2 #1 - #7, CRVT3 #1 - #8, and CRVT3 #1 - #8)	0.348	0.348	0.760	0.146	1.88	11.10	-
Welding and Thermal Cutting (MIG 1 - 21 & 23 - 27, SW1, FC1, and LC1)	9.78	9.78	-	-	-	-	0.243
Total Emissions	10.7	10.7	1.07	24.1	2.65	15.6	Single less than 10 Total less than 25

### County Attainment Status

The source is located in White County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. White County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) White County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	10.7
PM10	10.7
SO <sub>2</sub>	1.07
VOC	27.4
CO	2.65
NO <sub>x</sub>	15.6

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,  
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and  
(c) any combination of HAPs is less than 25 tons/year.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63 Subpart T, because this source does not use halogenated solvents in the two (2) cold cleaner degreasers, PWCD1 and HACD1.

## State Rule Applicability - Entire Source

### 326 IAC 2-6 (Emission Reporting)

This source is located in White County and the potential to emit PM, PM<sub>10</sub>, VOC, NO<sub>x</sub>, CO, and SO<sub>2</sub> are less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

### 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

## State Rule Applicability - Individual Facilities

### 326 IAC 6-3-2 (Process Operations)

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the three (3) paint booths known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1) are in operation, in order to comply with this limit.

- (b) The allowable PM emission rate for the twenty-six (26) MIG welding stations, known as MIG1 - 21 & MIG 23 - 27, shall not exceed 17.5 pounds of PM per hour when operating at a process weight rate of 8.68 tons per hour, total. The potential to emit of the twenty-six (26) MIG welding stations 0.676 pounds of PM per hour. Therefore, the twenty-six (26) MIG welders will comply with this limit. This limit is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$



- (c) The allowable PM emission rate for the one (1) stick welder, known as SW1, shall not exceed 4.40 pounds of PM per hour when operating at a process weight rate of 1.11 tons per hour. The potential to emit of SW1 is 0.02 pounds of PM per hour. Therefore, SW1 is in compliance with this limit. This limit is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (d) The allowable PM emission rate for the one (1) laser cutting station, known as LC1, shall not exceed 42.7 pounds of PM per hour when operating at a process weight rate of 40.8 tons per hour. The potential to emit of LC1 is 0.487 pounds of PM per hour. Therefore, LC1 is in compliance with this limit. This limit is based on the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (e) The allowable PM emission rate for the one (1) flame cutting station, known as FC1, shall not exceed 50.0 pounds of PM per hour when operating at a process weight rate of 88.0 tons per hour. The potential to emit of FC1 is 1.05 pounds of PM per hour. Therefore, FC1 is in compliance with this limit. This limit is based on the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

#### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

The three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1) are subject to 326 IAC 8-2-9 because the paint booths were constructed after July 1990, the potential to emit of VOC is greater than fifteen (15) pounds per day and the surface coating of metal hydraulic drive axle assemblies takes place at these booths. The three (3) paint booths shall be limited to the following:

Three and five-tenths (3.5) pounds of VOC per gallon of coating less water, for air dried and forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the one (1) auxiliary paint booth (AUX1) is not in compliance with this requirement. The source shall comply with this rule by calculating the daily volume weighted average of VOC content for the three (3) paint booths, known as paint booth main (PBM), paint booth prime coat (PBPC), and auxiliary paint booth (AUX1), using the following formula, where n is the number of coatings (c):

$$c = n$$

$$\frac{3 \text{ coating c (gal)} \times \text{VOC content of c (lbs/gal, less water)}}{c = 1}$$

$c = n$   
3 coating c (gal)  
 $c = 1$

326 IAC 8-3-2 (Cold Cleaner Operation)

The two (2) cold cleaner degreasers, known as HACD1 and PWCD1, were constructed after January 1, 1980 in White County. Therefore the requirements of 326 IAC 8-3-2 are applicable. The Permittee shall do the following while operating the two (2) cold cleaners:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operating requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Operation)

- (a) The one (1) cold cleaner degreaser known as HACD1, was constructed before July 1, 1990 in White County. Therefore, the requirements are not applicable to this degreaser.
- (b) The cold cleaner degreaser, known as PWCD1 was constructed after July 1, 1990 and does not have a remote solvent reservoir. Therefore, the requirements of 326 IAC 8-3-5 are applicable to the cold cleaner degreaser, known as PWCD1. The Permittee shall ensure that the following control equipment requirements are met while operating cold cleaner PWCD1:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (B) the solvent is agitated; or
    - (C) the solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in

subsection (b).

- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

The Permittee shall ensure that the following operating requirements are met:

- (6) Close the cover whenever articles are not being handled in the degreaser.
- (7) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (8) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## Conclusion

The operation of this metal hydraulic axle assemblies source shall be subject to the conditions of the attached proposed Minor Source Operating Permit No. 181-16107-00031.

Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations

Company Name: Tuthill Transport Technologies  
Address City IN Zip: 9098 West 800 South, Brookston, Indiana 47923  
Permit No. 181-16107  
Pit ID: 181-00031  
Reviewer: Madhurima D. Moulik  
Date: June 18, 2002

Proposed New Emission Unit's Potential to Emit

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency	Type of Product, and Material Being Coated
PBPC																	
Primer:																	
PNT202 Hardener	11.05	39.05%	24.3%	14.7%	32.4%	46.07%	0.30000	2.000	2.41	1.63	0.98	23.44	4.28	8.85	3.53	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT312 Breakthrough Equip. Cleaner	8.04	100.00%	66.4%	33.6%	64.1%	0.00%	0.04500	2.000	7.51	2.70	0.24	5.83	1.06	0.00	N/A	100%	
PM									Control Efficiency		98.00%						
Worst Case* Uncontrolled Subtotal											1.22	29.27	5.34	8.85			
Worst Case* Controlled Subtotal											1.22	29.27	5.34	0.177			

Existing Emission Units' Potential to Emit

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency	Type of Product, and Material Being Coated
PBM																	
Topcoats:																	
PNT212 Gloss Black	8.68	77.35%	64.3%	13.0%	67.0%	15.73%	0.35600	2.000	3.42	1.13	0.80	19.30	3.52	3.07	7.18	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT214 JDTC Satin Black	9.02	67.34%	55.3%	12.0%	59.9%	25.96%	0.35600	2.000	2.70	1.08	0.77	18.50	3.38	4.59	4.17	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT282 Umbra Gray	8.75	66.02%	57.0%	9.0%	59.8%	29.79%	0.35600	2.000	1.96	0.79	0.56	13.46	2.46	4.64	2.64	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT312 Breakthrough Equip. Cleaner	8.04	100.00%	66.4%	33.6%	64.1%	0.00%	0.04500	2.000	7.51	2.70	0.24	5.83	1.06	0.00	N/A	100%	
AUX1																	
Primer:																	
PNT 120 Red Oxide	9.57	42.90%	0.0%	42.9%	0.0%	36.90%	0.00930	4.000	4.11	4.11	0.15	3.67	0.67	0.45	11.13	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
Topcoats:																	
PNT 100 Flat Black	8.80	61.40%	0.0%	61.4%	0.0%	25.50%	0.07850	4.000	5.40	5.40	1.70	40.72	7.43	2.34	21.19	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 102 Gloss Black	7.50	63.80%	0.0%	63.8%	0.0%	27.20%	0.07850	4.000	4.79	4.79	1.50	36.06	6.58	1.87	17.59	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 104 Flat Black	8.68	58.30%	0.0%	58.3%	0.0%	27.60%	0.07850	4.000	5.06	5.06	1.59	38.14	6.96	2.49	18.33	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 106 Black	11.94	31.70%	0.0%	31.7%	0.0%	48.40%	0.07850	4.000	3.78	3.78	1.19	28.52	5.21	5.61	7.82	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 108 Acrylic Modifier	8.27	39.20%	0.0%	39.2%	0.0%	56.10%	0.07850	4.000	3.24	3.24	1.02	24.43	4.46	3.46	5.78	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 122 Red Enamel	8.31	56.80%	0.0%	56.8%	0.0%	35.00%	0.07850	4.000	4.72	4.72	1.48	35.57	6.49	2.47	13.49	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 124 Massey Red	9.13	57.90%	0.0%	57.9%	0.0%	34.10%	0.07850	4.000	5.29	5.29	1.66	39.84	7.27	2.64	15.50	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 140 JD Yellow	7.75	61.60%	0.0%	61.6%	0.0%	26.70%	0.07850	4.000	4.77	4.77	1.50	35.98	6.57	2.05	17.88	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 142 NH Yellow	8.07	58.10%	0.0%	58.1%	0.0%	29.00%	0.07850	1.000	4.69	4.69	0.37	8.83	1.61	0.58	16.17	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 160 JD Green	7.49	63.60%	0.0%	63.6%	0.0%	27.00%	0.07850	1.000	4.76	4.76	0.37	8.97	1.64	0.47	17.64	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 162 Class Green	8.29	59.60%	0.0%	59.6%	0.0%	29.50%	0.07850	1.000	4.94	4.94	0.39	9.31	1.70	0.58	16.75	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 180 Silver	7.71	63.80%	0.0%	63.8%	0.0%	27.80%	0.07850	1.000	4.92	4.92	0.39	9.27	1.69	0.48	17.69	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies
PNT 182 Class Orange	9.52	35.40%	0.0%	35.4%	0.0%	53.50%	0.07850	1.000	3.37	3.37	0.26	6.35	1.16	1.06	6.30	50%	Paint: Unpainted Metal Hydraulic Drive Assemblies

Note: all properties of the materials are \*as applied\*to the substrate for Paints in AUX1

PM	Control Efficiency	98.00%				
Worst Case* Uncontrolled Subtotal		2.90	69.51	12.69	10.69	
Worst Case* Controlled Subtotal		2.90	69.51	12.69	0.214	

State Potential Emissions

Add worst case coating to all solvents

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

Entire Source's Potential to Emit From Painting

	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)
Entire Source "Worst Case" Uncontrolled Total:	4.12	98.78	18.03	19.54
Entire Source "Worst Case" Controlled Total:	4.12	98.78	18.03	0.391

## Page 2 of 8 TSD AppA

### New Emission Unit HAPs Emissions

### Existing Emission Units HAPs Emissions

Note: all properties of the materials are "as supplied" by the manufacturer

### Entire Source HAPs Emissions From Painting

	Xylene Emissions (tons/yr)	MIBK Emissions (tons/yr)	MEK Emissions (tons/yr)	Toulene Emissions (tons/yr)	Ethyl Benzene Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Cobalt Emissions (tons/yr)	Lead Compound Emissions (tons/yr)
Entire Source "Worst Case" Individual Total:	4.39	2.84	0.107	2.38	0.794	9.47	0.154	1.19
Entire Source "Worst Case" Overall Total:	21.3							



**Appendix A: Emission Calculations**  
**Propane Ovens**

Page 3 of 8 TSD App A

**Company Name:** Tuthill Transport Technologies  
**Address City IN Zip:** 9098 West 800 South, Brookston, Indiana 47923  
**Permit:** 181-16107  
**Plt ID:** 181-00031  
**Reviewer:** Madhurima D. Moulik  
**Date:** June 18, 2002

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

SO2 Emission factor = 86.5 x S  
S = Sulfur Content =

1.50%

3.10

296.8

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	1.3 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.089	0.089	0.193	2.82	0.037	0.475

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

**Ovens**

**Rating in mmBtu's/hr**

PBMCO

1.50

PBPCCO

0.800

DO1

0.800

**Total:**

**3.10**

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Fires 6.22 SCC 01-010-02

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton





**Appendix A: Emission Calculations  
Propane Space Heaters**

Page 4 of 8 TSD App A

**Company Name:** Tuthill Transport Technologies  
**Address City IN Zip:** 9098 West 800 South, Brookston, Indiana 47923  
**Permit:** 181-16107  
**Plt ID:** 181-00031  
**Reviewer:** Madhurima D. Moulik  
**Date:** June 18, 2002

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 86.5 x S S = Sulfur Content =	1.50%
12.21	1169.0		

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	1.3 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.351	0.351	0.758	11.1	0.146	1.87

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

<u>Space Heaters</u>	<u>Rating in mmBtu's/hr</u>
REZ 1,2, and 3	0.400, each
MSH1 & 2	0.130, each
CRVT2 #1 - #7	0.420, each
CRVT3 #1 - #8	0.480, each
CRVT3 #1 - #8	0.480, each
SH1	0.130
<b>Total:</b>	<b>12.21</b>

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Fires 6.22 SCC 01-010-02

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Appendix A: Emission Calculations  
Propane Tube Heater**

Page 5 of 8 TSD App A

**Company Name:** Tuthill Transport Technologies  
**Address City IN Zip:** 9098 West 800 South, Brookston, Indiana 47923  
**Permit:** 181-16107  
**Plt ID:** 181-00031  
**Reviewer:** Madhurima D. Moulik  
**Date:** June 18, 2002

Unit: One (1) Fire Immersion Tube Heater (WTS1B)

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

SO<sub>2</sub> Emission factor = 86.5 x S

S = Sulfur Content = 1.50%

1.50

144

Emission Factor in lb/kgal	Pollutant					
	PM* 0.6	PM10* 0.6	SO <sub>2</sub> 1.3 (86.5S)	NO <sub>x</sub> 19.0	VOC 0.25	CO 3.2
Potential Emission in tons/yr	0.043	0.043	0.093	1.36	0.018	0.230

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Fires 6.22 SCC 01-010-02

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Appendix A: Emission Calculations  
Propane Evaporator**

**Company Name:** Tuthill Transport Technologies  
**Address City IN Zip:** 9098 West 800 South, Brookston, Indiana 47923  
**Permit:** 181-16107  
**Plt ID:** 181-00031  
**Reviewer:** Madhurima D. Moulik  
**Date:** June 18, 2002

Unit: One (1) Evaporator (EVAP1)

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

SO<sub>2</sub> Emission factor = 86.5 x S

S = Sulfur Content =

1.50%

0.395

37.8

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	0.6	0.6	1.3 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.011	0.011	0.025	0.359	0.005	0.061

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Fires 6.22 SCC 01-010-02

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Appendix A: Emission Calculations**  
**Degreasing Operations**  
**VOC and HAP Emission Calculations**

Page 7 of 8 TSD App A

**Company Name:** Tuthill Transport Technologies  
**Address City IN Zip:** 9098 West 800 South, Brookston, Indiana 47923  
**Permit:** 181-16107  
**Plt ID:** 181-00031  
**Reviewer:** Madhurima D. Moulik  
**Date:** June 18, 2002

Material	Maximum Consumption (lbs/yr)	Weight % VOC	VOC Emissions (tons/yr)	Total HAPs Emissions (tons/yr)	Solvent Used
<b>Degreasing</b>					
Parts Wash Cold Cleaner Degreaser (PWCD1)	13323	100%	6.66	0.000	Mineral Spirits
Hose Assembly Cold Degreaser (HACD1)	4000	100%	2.00	0.000	Mineral Spirits

<b>TOTALS:</b>	<b>(tons/yr):</b>	<b>8.66</b>	<b>0.000</b>
----------------	-------------------	-------------	--------------

Total State Potential Emissions

**METHODOLOGY**

VOC/HAPs emission rate (tons/yr) = Material Usage (lbs/hr) \* Weight % VOC/HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

# Appendix A: Welding and Thermal Cutting

Page 8 of 8 TSD App A

Company Name: Tuthill Transport Technologies  
Address City IN Zip: 9098 West 800 South, Brookston, Indiana 47923  
Permit No. : 181-16107  
Plt ID: 181-00031  
Reviewer: Madhurima D. Moulik  
Date: June 18, 2002

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS * (lb pollutant / lb electrode)					EMISSIONS (lb/hr)					TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cb	Cr	PM = PM10	Mn	Ni	Cb	Cr	
WELDING														
MIG1-21 & MIG23-27														
Metal Inert Gas (MIG)(ER70S-3)	26	5		0.005	0.0003	0.000001	0.000001	0.000001	0.676	0.041	0.0001	0.0001	0.0001	0.042
Metal Inert Gas (MIG)(EA3K)	26	5		0.005	0.0003	0.000001	0.000001	0.000001	0.676	0.041	0.0001	0.0001	0.0001	0.042
SW1														
Stick (E6011 electrode)	1	0.53		0.038	0.010	0.000005	0.000001	0.000005	0.020	0.005	0.000003	0.000001	0.000003	0.005
FLAME AND LASER CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)					EMISSIONS (lbs/hr)					TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cb	Cr	PM = PM10	Mn	Ni	Cb	Cr	
FC1 and LC1														
Oxyacetylene (FC1)	1	3	36	0.1622	0.0005	0.0001	0.00	0.0003	1.05	0.003	0.001	0.000	0.002	0.006
Laser Cutting Table (LC1)	1	0.5	100	0.1622	0.0005	0.0001	0.00	0.0003	0.487	0.002	0.0003	0.000	0.001	0.003
EMISSION TOTALS									PM = PM10	Mn	Ni	Cb	Cr	Total HAPs
Potential Emissions lbs/hr									2.23	0.051	0.001	0.0001	0.003	0.056
Potential Emissions lbs/day									53.6	1.23	0.026	0.003	0.071	1.33
Potential Emissions tons/year									9.78	0.225	0.005	0.001	0.013	0.243

Note: for MIG EA3K lbs/hr per station was attained by dividing the 130lbs/hr total by twenty-six (26) stations

## METHODOLOGY

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.